



February 28, 2012

Jocelyn G. Boyd, Esquire  
Chief Clerk/Administrator  
Public Service Commission of South Carolina  
101 Executive Center Drive, Suite 100  
Columbia, SC 29210

Re: Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.  
Power Plant Performance Report  
Docket No. 2006-224-E

Dear Mrs. Boyd:

Enclosed is the Power Plant Performance Report for Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc. for the month of January 2012. Since the Weatherspoon Plant was retired in September 2011, only its historical data will be listed on the capacity factor portion of this report.

Sincerely,

A handwritten signature in black ink, appearing to read "Len S. Anthony", with a stylized flourish at the end.

Len S. Anthony  
General Counsel  
Progress Energy Carolinas, Inc.

LSA/dhs  
Attachment  
45612

c: John Flitter (ORS)

January 2012

The following units had no off-line outages during the month of January:

Brunswick Unit 1  
Brunswick Unit 2  
Harris Unit 1  
Mayo Unit 1  
Roxboro Unit 2  
Roxboro Unit 3  
Roxboro Unit 4

Robinson Unit 2

Full Forced Outage

- A. Duration: The unit was taken out of service at 0:27 on January 18, and remained offline until the commencement of the planned refueling outage, which began on January 21.
- B. Cause: Plant Shutdown due to Overdue Station Battery Test
- C. Explanation: Due to a missed Technical Specification surveillance on the “B” Station Battery, the unit was required to commence a unit shutdown. The surveillance, a battery capacity test required every five years, can only be conducted with the unit in a shut down condition. During the review and decision-making process to extend the last operating cycle, the fact that this surveillance would go overdue prior to entering the planned refueling outage was not identified. The investigation to determine root cause is still in progress.
- D. Corrective Action: The unit was shut down, and the required testing was scheduled and completed satisfactorily. An investigation into how the surveillance schedule was missed was initiated, and is scheduled to complete in early March. The plant transitioned into the scheduled refueling outage on January 21.

Full Planned Outage

- A. Duration: The unit officially transitioned from forced outage in the scheduled refueling outage at 0:00 on January 21, and was offline for the remainder of the month. The unit was offline 264 hours in January.
- B. Cause: Scheduled Refueling Outage
- C. Explanation: The unit was taken out of service for a scheduled refueling outage. In addition to refueling, required maintenance and inspections are being carried out during this outage.
- D. Corrective Action: Planned outage activities were in progress at the end of January.

	Month of January 2012		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	938 MW		938 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	706,919 MWH		8,210,119 MWH		2
Capacity Factor	101.30 %		99.92 %		
Equivalent Availability	99.94 %		97.82 %		
Output Factor	101.30 %		101.03 %		
Heat Rate	10,424 BTU/KWH		10,416 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	90,142	1.08	3
Partial Scheduled	73	0.01	68,799	0.82	4
Full Forced	0	0.00	0	0.00	5
Partial Forced	18,408	2.54	41,428	0.50	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	725,400		8,362,150		8

\* See 'Notes for Fossil Units' filed with the January 2012 report.

\*\* Gross of Power Agency

	Month of January 2012		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	932 MW		921 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	707,187 MWH		6,341,983 MWH		2
Capacity Factor	101.99 %		78.61 %		
Equivalent Availability	100.00 %		77.42 %		
Output Factor	101.99 %		98.39 %		
Heat Rate	10,484 BTU/KWH		10,589 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	250,554,374	3,045.21	3
Partial Scheduled	0	0.00	136,292	1.66	4
Full Forced	0	0.00	473,005	5.75	5
Partial Forced	1,845	0.26	100,090	1.22	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	709,032		8,227,830		8

\* See 'Notes for Fossil Units' filed with the January 2012 report.

\*\* Gross of Power Agency

	Month of January 2012		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	900 MW		900 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	700,273 MWH		8,116,511 MWH		2
Capacity Factor	104.58 %		102.95 %		
Equivalent Availability	100.00 %		99.88 %		
Output Factor	104.58 %		102.95 %		
Heat Rate	10,513 BTU/KWH		10,667 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	0	0.00	3
Partial Scheduled	0	0.00	8,404	0.10	4
Full Forced	0	0.00	0	0.00	5
Partial Forced	0	0.00	8,377	0.10	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	696,384		8,067,960		8

\* See 'Notes for Fossil Units' filed with the January 2012 report.

\*\* Gross of Power Agency

	Month of January 2012		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	724 MW		724 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	280,817 MWH		6,077,669 MWH		2
Capacity Factor	52.13 %		95.83 %		
Equivalent Availability	54.81 %		94.58 %		
Output Factor	94.96 %		100.63 %		
Heat Rate	10,678 BTU/KWH		10,827 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	200,112	35.48	200,112	3.07	3
Partial Scheduled	0	0.00	24,327	0.37	4
Full Forced	54,235	9.62	114,110	1.75	5
Partial Forced	28,788	5.10	107,503	1.65	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	563,952		6,515,980		8

\* See 'Notes for Fossil Units' filed with the January 2012 report.

	Month of January 2012		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	735 MW		732 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	391,628 MWH		3,497,167 MWH		2
Capacity Factor	71.62 %		54.56 %		
Equivalent Availability ***	100.00 %		90.85 %		
Output Factor	71.62 %		63.60 %		
Heat Rate	10,627 BTU/KWH		10,802 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	365,278	5.70	3
Partial Scheduled	0	0.00	11,050	0.17	4
Full Forced	0	0.00	60,517	0.94	5
Partial Forced	0	0.00	150,706	2.35	6
Economic Dispatch	155,212	28.38	2,067,790	32.26	7
Possible MWH	546,840		6,409,400		8

\* See 'Notes for Fossil Units' filed with the January 2012 report.

\*\* Gross of Power Agency

\*\*\* Tornado damage in April 2011 resulted in lower than expected Equivalent Availability for Mayo 1. Excluding the effects of the tornado damage would result in 12 month ending January 2011 EA = 92.49.



	Month of January 2012		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	667 MW		665 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	348,496 MWH		2,534,192 MWH		2
Capacity Factor	70.23 %		43.51 %		
Equivalent Availability	99.63 %		64.29 %		
Output Factor	70.23 %		68.19 %		
Heat Rate	10,177 BTU/KWH		10,241 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	2,072,130	35.58	3
Partial Scheduled	0	0.00	4,116	0.07	4
Full Forced	0	0.00	0	0.00	5
Partial Forced	1,833	0.37	4,682	0.08	6
Economic Dispatch	145,919	29.40	1,204,842	20.69	7
Possible MWH	496,248		5,824,670		8

\* See 'Notes for Fossil Units' filed with the January 2012 report.

	Month of January 2012		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	698 MW		696 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	312,435 MWH		3,471,877 MWH		2
Capacity Factor	60.16 %		56.95 %		
Equivalent Availability	98.14 %		91.89 %		
Output Factor	60.16 %		63.99 %		
Heat Rate	11,175 BTU/KWH		10,876 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	425,920	6.99	3
Partial Scheduled	1,833	0.35	4,958	0.08	4
Full Forced	0	0.00	30,619	0.50	5
Partial Forced	7,839	1.51	34,459	0.57	6
Economic Dispatch	197,206	37.97	2,128,287	34.91	7
Possible MWH	519,312		6,096,230		8

\* See 'Notes for Fossil Units' filed with the January 2012 report.

	Month of January 2012		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	711 MW		706 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	302,130 MWH		3,737,953 MWH		2
Capacity Factor	57.12 %		60.48 %		
Equivalent Availability	95.00 %		98.89 %		
Output Factor	57.12 %		61.52 %		
Heat Rate	10,136 BTU/KWH		10,897 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	16,752	0.27	3
Partial Scheduled	0	0.00	631	0.01	4
Full Forced	0	0.00	0	0.00	5
Partial Forced	26,457	5.00	51,125	0.83	6
Economic Dispatch	200,397	37.88	2,374,163	38.41	7
Possible MWH	528,984		6,180,910		8

\* See 'Notes for Fossil Units' filed with the January 2012 report.

\*\* Gross of Power Agency

## NOTES FOR FOSSIL UNITS

1. Maximum Dependable Capacity (MDC) in MW: The gross electrical output measured at the output terminals of the turbine generator, during the most restrictive seasonal conditions, minus the normal station service loads.
2. MWH Generated in the Period: The gross electrical output measured at the output terminals of the turbine generator, minus the normal station service loads, during the gross hours of the reporting period.
3. MWH Not Generated Due to Full Scheduled Outages: Calculated by multiplying the full scheduled outage hours (breaker to breaker as reported to NERC) by the MDC rating. This assumes that the unit would be in demand at the time of the outage. However, if the system load was such that the total output of the unit would not be required (due to economic dispatch), the actual MWH not generated due to the outage would be less.
4. MWH Not Generated Due to Partial Scheduled Outages: Calculated by multiplying the partial scheduled outage hours by the MW derating (as reported to NERC). Also included is an estimate of the MWH not generated while reducing power to take the unit off line for a full scheduled outage and the MWH not generated while bringing the unit back to power after the outage (Ramp Time). However, if the system load was such that the total output of the unit would not have been required, the actual MWH not generated due to the outage would be less.
5. MWH Not Generated Due to Full Forced Outages: Calculated by multiplying the full forced outage hours (breaker to breaker as reported to NERC) by the MDC rating. This assumes that the unit would be in demand at the time of the outage. However, if the system load was such that the total output of the unit would not have been required (due to economic dispatch), the actual MWH not generated due to the outage would be less.
6. MWH Not Generated Due to Partial Forced Outages: Calculated by multiplying the partial forced outage hours by the MW derating (as reported to NERC). Included is an estimate of the MWH not generated while reducing power to take the unit off line for a full forced outage and the MWH not generated while bringing the unit back to power after the outage (Ramp Time). However, if the system load was such that the total output of the unit would not have been required, the actual MWH not generated due to the outage would be less.
7. MWH Not Generated Due to Economic Dispatch: Included is an estimate of the MWH not generated due to the unit not being in demand on a System Dispatch basis. System dispatch takes into consideration the reliability and stability of the system as well as economic dispatch since consideration must be given to the mix of generation on line at any one point in time. Also included are estimates of the MWH not generated due to plant conditions (not defined by NERC), which occur from time to time such as: high backpressure, silica in boiler water, phosphate water treatment carryover, instrumentation calibration, and equipment testing.
8. Total MWH Possible in Period: Calculated by multiplying MDC by hours in period.

## NOTES FOR NUCLEAR UNITS

1. Maximum Dependable Capacity (MDC) in MW: The gross electrical output measured at the output terminals of the turbine generator, during the most restrictive seasonal conditions, minus the normal station service loads.
2. MWH Generated in the Period: The gross electrical output measured at the output terminals of the turbine generator, minus the normal station service loads, during the gross hours of the reporting period.
3. MWH Not Generated Due to Full Scheduled Outages: Calculated by multiplying the full scheduled outage hours (breaker to breaker as reported to NERC) by the MDC rating. This assumes that the unit would be in demand at the time of the outage. However, if the system load was such that the total output of the unit would not have been required, the actual MWH not generated due to the outage would be less.
4. MWH Not Generated Due to Partial Scheduled Outages: Calculated by multiplying the partial scheduled outage hours by the MW derating (as reported to NERC). Also included is an estimate of the MWH not generated while reducing power to take the unit off line for a full scheduled outage and the MWH not generated while bringing the unit back to power after the outage (Ramp Time). However, if the system load was such that the total output of the unit would not have been required, the actual MWH not generated due to the outage would be less.
5. MWH Not Generated Due to Full Forced Outages: Calculated by multiplying the full forced outage hours (breaker to breaker as reported to NERC) by the MDC rating. This assumes that the unit would be in demand at the time of the outage.
6. MWH Not Generated Due to Partial Forced Outages: Calculated by multiplying the partial forced outage hours by the MW derating (as reported to NERC). Included is an estimate of the MWH not generated while reducing power to take the unit off line for a full forced outage and the MWH not generated while bringing the unit back to power after the outage (Ramp Time). Also included are estimated of the MWH not generated due to plant conditions (not defined by NERC) which occur from time to time such as: preconditioning of fuel, excessive cooling water temperature, and off-peak equipment testing required by the NRC. However, if the system load was such that the total output of the unit would not have been required, the actual MWH not generated due to the outage would be less.
7. MWH Not Generated Due to Economic Dispatch: Included is an estimate of the MWH not generated due to the unit not being fully in demand based on system load conditions. Also included is the MWH not generated on the nuclear plants due to fuel limitations in the cores or the fuel being “stretched” to meet refueling outages.
8. Total MWH Possible in Period: Calculated by multiplying MDC by hours in period.

Plant	Unit	Current MW Rating	January 2011 - December 2011	January 2012	January 2012 - January 2012
Asheville	1	196	54.69	0.00	0.00
Asheville	2	187	49.04	59.07	59.07
Cape Fear	5	148	45.42	25.42	25.42
Cape Fear	6	175	41.91	12.30	12.30
Lee	1	80	30.76	6.71	6.71
Lee	2	80	16.71	4.80	4.80
Lee	3	252	47.30	22.56	22.56
Mayo	1	735	55.15	71.62	71.62
Robinson	1	179	36.44	20.73	20.73
Roxboro	1	374	54.46	44.70	44.70
Roxboro	2	667	44.58	70.23	70.23
Roxboro	3	698	58.89	60.16	60.16
Roxboro	4	711	62.16	57.12	57.12
Sutton	1	98	27.49	31.93	31.93
Sutton	2	107	25.79	16.81	16.81
Sutton	3	397	34.10	29.61	29.61
Weatherspoon *	1	49	4.64		
Weatherspoon *	2	49	12.73		
Weatherspoon *	3	79	18.74		
Fossil System Total		5,261	48.18	47.73	47.73
Brunswick	1	938	100.14	101.30	101.30
Brunswick	2	932	78.63	101.99	101.99
Harris	1	900	102.89	104.58	104.58
Robinson Nuclear	2	724	100.34	52.13	52.13
Nuclear System Total		3,494	95.21	92.14	92.14
Total System		8,755	66.40	63.56	63.56

\* The Weatherspoon units were retired in September 2011; however, the 2011 data is included for historical reference.

Amended SC Fuel Rule  
Related to Nuclear Operations

There shall be a rebuttable presumption that an electrical utility made every reasonable effort to minimize cost associated with the operation of its nuclear generation system if the utility achieved a net capacity factor of  $\geq 92.5\%$  during the 12 month period under review. For the test period March 1, 2011 through January 31, 2012, actual period to date performance is summarized below:

Period to Date: March 1, 2011 to January 31, 2012

Nuclear System Capacity Factor Calculation (Based on net generation)

A.. Nuclear system actual generation for SCPSC test period	A =	26,340,964 MWH
B. Total number of hours during SCPSC test period	B =	8.088 hours
C. Nuclear system MDC during SCPSC test period (see page 2)	C =	3,482 MW for 2011 3,494 MW for 2012
D. Reasonable nuclear system reductions (see page 2)	D =	2,410,316 MWH
A. SC Fuel Case nuclear system capacity factor: $[(A + D) / (B + C)] * 100 =$		
		102.1%

NOTE:

If Line Item E  $> 92.5\%$ , presumption of utility's minimum cost of operation.

If Line Item E  $< 92.5\%$ , utility has burden of proof of reasonable operations.

Amended SC Fuel Rule  
Nuclear System Capacity Factor Calculation  
Reasonable Nuclear System Reductions  
Period to Date: March 1, 2011 to January 31, 2012

Nuclear Unit Name and Designation	BNP Unit # 1	BNP Unit # 2	HNP Unit # 1	RNP Unit # 2	Nuclear System
Unit MDC	938 MW	920 MW	900 MW	724 MW	3,482 MW
Reasonable refueling outage time (MWH)	0	966,549	0	200,112	
Reasonable maintenance, repair, and equipment replacement outage time (MWH)	131,696	791,346	1,212	115,281	
Reasonable coast down power reductions (MWH)	3,604	5,579	0	0	
Reasonable power ascension power reductions (MWH)	19,741	60,508	0	16,432	
Prudent NRC required testing outages (MWH)	5,874	45,868	322	23,653	
SCPSC identified outages not directly under utility control (MWH)	0	0	0	0	
Acts of Nature reductions (MWH)	10,756	11,541	0	242	
Reasonable nuclear reduction due to low system load (MWH)	0	0	0	0	
Unit total excluded MWH	171,671	1,881,391	1,534	355,720	
Total reasonable outage time exclusions [carry to Page 1, Line D]					2,410,316